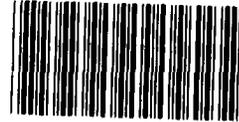


UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

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COMMUNITY AND ECONOMIC
DEVELOPMENT DIVISION

Dr. Ned A. Ostenso
Director, Office of Sea Grant
National Oceanic and Atmospheric
Administration



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Dear Dr. Ostenso:

The General Accounting Office is currently reviewing certain aspects of the [Administration of the National Sea Grant Program]. As we discussed with you at the beginning of this review, we planned to examine various Sea Grant activities to identify specific areas that need further review and analysis. At that time, we told you that we would keep you fully apprised of our findings and bring to you matters which, in our view, warrant your attention. We are therefore bringing to your attention the following:

--Many Sea Grant projects appear to have only limited application and to be of little benefit to the identified user community.

--A followup evaluation appears to be needed to determine if the federally supported Sea Grant projects are meeting expected goals and objectives.

We have visited Sea Grant institutions in six States--Connecticut, Delaware, Maine, Maryland, New Hampshire, and Rhode Island. We have also contacted Sea Grant personnel in California, Florida, Oregon, and Washington. In addition, we have discussed various aspects of the Sea Grant Program with Federal officials in the Office of Sea Grant, the National Marine Fisheries Service, and the Office of Coastal Zone Management.

SEA GRANT PROJECTS
DO NOT MEET USERS NEEDS

As you know, the authors of the original Sea Grant legislation were concerned that a major problem could arise in a program that had as its statutory aim the fostering of applied research in the marine field. The problem was finding a way to get the practical information out of the laboratories and scientific journals and into the hands

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of those who could really use it. The Congress therefore established the marine advisory services as the means to communicate the results of research to the appropriate user groups.

In addition to disseminating information, the advisory services are also important sources of information and guidance to the Sea Grant institutions, providing feedback through which users' concerns can be communicated to program administrators and researchers.

During our review we contacted marine advisory personnel in several States. Many of these specialists were concerned about the types of projects being approved for funding under the Sea Grant Program. They were particularly concerned about the lack of applied research. The basic concerns of the advisory specialists were twofold. First, they said they were not always successful in getting personnel at some Sea Grant institutions to address specific problems or matters of concern to the local community. Second, they felt that many research projects did not aid those who were to be served through the advisory services. Several Sea Grant directors at the universities added that principal investigators generally work only on projects that interest them. A recent study ^{1/} by the Massachusetts Institute of Technology Center for Policy Alternatives on potential economic impacts from projects supported by the Sea Grant program pointed out that " * * * most projects were essentially an extension of the principal investigator's existing area of research interest." The study also pointed out that " * * * the principal investigator usually saw himself as the sole originator (of project ideas)."

Other studies have emphasized the importance of communicating the results of Sea Grant research through the advisory services to the user community. For example, a Senate report ^{2/} discussed the advisory functions of the Sea Grant Program and stated that these functions were to:

" * * * carry useful information from the individuals or groups conducting sea grant programs to the potential users of that information--that is, the individuals employed in marine resource-related industries

^{1/}"An Analysis of the Potential Commercial and Foreign Trade Impacts of the Sea Grant Program," Mar. 1977.

^{2/}S. Rept. 1307, 89th Cong., 2d Sess., Committee on Merchant Marine and Fisheries, Aug. 1, 1966.

or activities--and * * * carry the problems and questions of the user back to the centers of sea grant programs."

In a report to the Secretary of Commerce ^{1/} dealing with this same subject, the National Advisory Committee on Oceans and Atmosphere stated that the advisory services were to translate marine research and technology into language understandable to the public and business community. Continuing, the Advisory Committee pointed out that Sea Grant projects, in its view, should be of low cost and aimed at prompt and practical results.

We obtained a list of 60 projects that were completed during a 3-year period (1976-78) at three Sea Grant institutions--the Universities of Delaware, Maryland, and Rhode Island. We discussed the projects with advisory services personnel at these universities to ascertain:

- How many projects have produced results or information that has been communicated or disseminated by advisory services personnel to parties outside the university?
- How have the identified users benefited from the projects or research activity?

Advisory services personnel at the three universities told us that only seven projects have some impact on or were of some benefit to parties outside the universities. Many of the seven projects, they added, had only limited benefits to users. They also pointed out that three projects at the University of Rhode Island benefited only the individuals who were directly involved in the project; i.e., a fisherman who participated in experimental work on the salmonid aquaculture projects and another fisherman who was involved in experimenting with the design of a new net.

At the University of Delaware an advisory agent said that only one project--dealing with the planting of juvenile hard clams--resulted in useful information.

At the University of Maryland an advisory agent said that of 12 projects only 1 had any practical application.

^{1/}"The National Sea Grant Program: A Review by the National Advisory Committee on Oceans and Atmosphere," Nov. 3, 1976.

He could not provide us with any information to show that the project results were used by anyone in the private sector. The project dealt with the development of a low-cost oyster spat grow-out system.

NEED FOR A FOLLOWUP SYSTEM TO EVALUATE PROJECT PERFORMANCE

Our work at the various Sea Grant institutions and at the Office of Sea Grant also disclosed that a project evaluation system for completed projects has not been established. An Office of Program Evaluation report 1/ pointed out that the Office of Sea Grant did not have procedures to gather data for a followup analysis of completed projects.

The Office of Sea Grant, as you know, requests that project proposals include detailed information on the projects' objectives and expected benefits. Such information and its assessment are essential to the effective administration of the Sea Grant Program. However, in discussing project evaluation with officials at the Office of Sea Grant and at the institutional level, we were advised that there are presently no procedures to evaluate project performance and measure project accomplishments in relation to initial criteria and objectives.

CONCLUSIONS

We are aware of the problems associated with the question of applied versus basic research. We recognize also the role and objectives of the Sea Grant Program in connection with continued funding of the schools and universities involved. As part of these functions, there is, of course, a need to support the development of marine-related research. Notwithstanding these considerations, we believe that certain improvements are needed in the administration of the Sea Grant Program and that you should consider establishing specific measures to improve the program which serves to further the state of the art in marine-related research and education.

Specifically, we suggest that in reviewing and approving future projects a concerted effort be made to evaluate the merit of proposed projects from the users' perspective. Also, more attention should be directed toward determining the types of projects which would

1/"Sea Grant Capacity--Building and Resource Management," Oct. 1976, Office of Program Evaluation, Department of Commerce.

serve the extraordinary needs of the marine community, along these same lines, and in light of comments made by several of your advisory specialists, we suggest that special attention be paid to projects that may be rejected at a particular institution solely because the principal investigator cannot, or elects not, to perform research in a specific area.

In addition, we recognize that many of the projects conducted under the auspices of the Sea Grant Program do not lend themselves to easy evaluation. This is especially true in areas of basic research. Nevertheless, we believe that an evaluation system, including appropriate followup procedures, to regularly assess project results would improve the management of the National Sea Grant Program. We therefore believe that you should establish a followup system for completed projects to determine whether they accomplished the intended objectives.

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We would appreciate receiving within 30 days your views and comments on the matters discussed in this report. Should you desire additional information, we would be pleased to meet with you or members of your staff.

We are sending copies of this letter to the Assistant Secretary for Administration and Inspector General, Department of Commerce, and to the Administrator, National Oceanic and Atmospheric Administration.

Sincerely yours,



Frank V. Subalusky
Group Director